



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D2258-146
Job Sheet 208857



Part No: D2258-146

Job Qty: 4 pcs

Part Name: Placard



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 4/2/20

Job Tracking No:

Due Date: 5/1/20

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV F IPP RevA: new issue DD 10.01.18 verified by:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard Setup Hrs	Run Hrs	Workcenter/Supplier	Sign-off
100	Purchasing <i>Subcontract</i>	4 pcs		5/1/20	0.00	0.00	Purchasing - 1	<i>ME</i> APR 23 2020
							Purchasing - 2	
							Purchasing - 3	
110	Packaging 2-1 - Receive - B4B	4 pcs		5/1/20	0.00	0.00	Packaging 2 - 1 - B4B	
							Packaging 2 - 2 - B4B	
							Packaging 2 - 3 - B4B	
							Packaging 2 - 5 - B4B	<i>ME</i> APR 23 2020
							Packaging 2 - 4 - B4B	
							Packaging 2 - 6 - B4B	
							Packaging 2 - 7 - B4B	
							Packaging 2 - 8 - B4B	
							Packaging 2 - 9 - B4B	
							Packaging 2 - 10 - B4B	
							Packaging 2 - 11 - B4B	
							Packaging 2 - 12 - B4B	
							Packaging 2 - 13 - B4B	
							Packaging 2 - 14 - B4B	
							Packaging 2 - 15 - B4B	
							Packaging 2 - 16 - B4B	
							Packaging 2 - 17 - B4B	
							Packaging 2 - 18 - B4B	
							Packaging 2 - 19 - B4B	
							Packaging 2 - 20 - B4B	
							Packaging 2 - 21 - B4B	
							Packaging 2 - 22 - B4B	
							Packaging 2 - 23 - B4B	
							Packaging 2 - 24 - B4B	
							Packaging 2 - 25 - B4B	
							Packaging 2 - 26 - B4B	
							Packaging 2 - 27 - B4B	
							Packaging 2 - 28 - B4B	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S272829



Part: D2258-146

Job No: 208857

Serial No/Batch: S272829

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 04/27/20

					Packaging 2 - 29 - B4B	
					Packaging 2 - 30 - B4B	
					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
					Packaging 2 - 36 - B4B	
					Packaging 2 - 37 - B4B	
120 QC 6	4 pcs	5/1/20	0.00 0.00		QC 6 - 9	
					QC 6 - 68	DAS
					QC 6 - 61	82
					QC 6 - 40	9-89
					QC 6 - 81	
					QC 6 - 82	
130 Packaging 3-1 - Stock - B4B	4 pcs	5/1/20	0.00 0.00		Packaging 3 - 1 - B4B	APR 27 2020
	6				Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B ✓	DAS
					Packaging 3 - 4 - B4B	80 APR 28 2020
					Packaging 3 - 5 - B4B	9-89
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	
					Packaging 3 - 37 - B4B	
140 QC 21 - SA	4 pcs	5/1/20	0.00 0.00		QC 21 - SA - 21	DAS
					QC 21 - SA - 70	APR 29 2020 70
					QC 21 - SA - 53	9-89
Part Op 100 - Issue P/O: 46250 E-mail or Ship electronic file and or dwg to vendor Manufacture as per Dwg and supplied						
Descriptions: files Possible supplier: Studio Letrage Material release note is required.						
110 - (Receive & Inspect for Damage & Mat'l Certs)						
120 - (QC6- All purchased or subcontracted products)						
130 - (Identify as per dwg & Stock Location: _____), ***ONE YEAR EXPIRED DATE FROM						

RECEIVING: ***

140 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2258-146P	Placard	4 pcs (1 ea)	100-Purchasing	5272828

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D2258-146P	4	0	0

Part Specifications

Specifications could not be found.

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19.0
16.0

MAXIMUM DISTRIBUTED LOAD
XXX lb/ YYY kg

D2258-XXX

D2258-XXX PLACARD
(XXX = ALLOWABLE WEIGHT IN POUNDS)

PART NUMBER	LOAD
D2258-132	132 lb/ 60 kg
D2258-146	146 lb/ 66 kg
D2258-154	154 lb/ 70 kg
D2258-160	160 lb/ 73 kg
D2258-170	170 lb/ 77 kg
D2258-176	176 lb/ 80 kg
D2258-200	200 lb/ 91 kg
D2258-220	220 lb/ 100 kg
D2258-300	300 lb/ 136 kg

SHOWN
RETURN TO
ENGINEERING
UNCONTROLLED
SUBJECT TO AMENDMENTS
WITHOUT NOTICE
WORK ORDER

NO. 208857

ML5
20-04-02

RELEASED
R 2011-06-29

- NOTES:
- 1) MATERIAL: RED LETTERS, 1 HIGH, ADHESIVE BACK
MANUFACTURED FROM 3M, 7 MIL MASKING FILM #8522CP OR
AVERY IPM #2031
 - 2) FINISH: N/A
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: N/A
 - 8) PART NUMBER = D2258-MAX DISTRIBUTED WEIGHT IN POUNDS (lbs) OF THE BASKET.
EXAMPLE: D2258-132 IS A BASKET WITH MAX DISTRIBUTED WEIGHT OF 132 POUNDS (lbs).

F	ADD P/N D2258-154 (ZN B5-1)	(REF. NCRI1-670)	MB	11.06.17
E	ADD P/N D2258-146 (ZN B5-1)	UPDATE TOLERANCE AS PURCHASED (ZN D4-1, D8-1)	CP	10.01.15
D	ADD P/N D2258-176		HS	09.06.03
C	REDRAWN. SEE PAR 08-026		AJS	08.10.29
B	ADDED NOTE		BW	05.11.29
A	NEW ISSUE		BW	04.02.28
REV.	DESCRIPTION	BY	DATE	
DESIGN	BW			
DRAWN	BW			
CHECKED	BW			
MFG. APPR.	BW			
APPROVED	BW			
DE APPR.	BW			
DATE	11.06.17			
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA				
DRAWING NO. D2258				
SHEET 1 OF 1				
REV. F				
UTILITY BASKET PLACARD				
SCALE NTS				
COPYRIGHT © 1994 BY DART AEROSPACE LTD				
THIS DOCUMENT IS PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED FOR THE PURPOSES SPECIFIED ONLY.				

Entered: _____

Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____		DISPOSITION		DEPARTMENT/PROCESS		MRB (QS1042)																	
Date: _____		Sequence #: _____		QTY Affected: _____		Disposition																	
Description Work Order Deviation																							
Root Cause <table border="1"><tr><td>Operator</td><td></td></tr><tr><td>Manufacturing Process</td><td></td></tr><tr><td>Equip/Tooling</td><td></td></tr><tr><td>Handling/Preservation</td><td></td></tr><tr><td>Material</td><td></td></tr><tr><td>Product Improvement</td><td></td></tr><tr><td>Process Improvement</td><td></td></tr><tr><td>Human Factors</td><td></td></tr></table>		Operator		Manufacturing Process		Equip/Tooling		Handling/Preservation		Material		Product Improvement		Process Improvement		Human Factors		FAULT CATEGORY					
		Operator																					
Manufacturing Process																							
Equip/Tooling																							
Handling/Preservation																							
Material																							
Product Improvement																							
Process Improvement																							
Human Factors																							
		Pressure/Forced Bending Crushing Cracks Crimp/Kink/Ripple/Wave/Twist Marks/Chatter Mislabeled Other/Details: _____		Contamination Misaligned/off center BOM/Route Broken/Damage/Defect Incomplete/Unclear Instructions Drill Holes Fit/Function		Power Loss/Surge Folio/Program Grain Direction Weld Wrong Stock Pulled Out of Sequence Off-set/Set-up																	
						Positioned Wrong Outside Tolerance Drawing Finish Part Lost/Missing Misread																	
		Completed By																					
		Lead hand / Supervisor																					
		QC / QA Coordinator																					



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB046250



Supplier: STU002-VC
Studio de Lettrage 2001
210 Main West
Hawkesbury,
ON
K6A 2H6 Canada
Phone: 613 632 5449
Fax: 613 632 9491

Attention: Grace, Batista

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB046250
PO Date: 4/8/20
Due Date: 4/20/20
Purchase Order Revision:
Revision Date:
Issued By: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Via: Ground
Pymt Terms: Net 30

Freight Terms:
Special Comments:

E-MAILED
2020-04-09

Items

Line Item	Job	Part	Drawing	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	208593	D2567P	D2567 Rev A			Placard as per Dwg Rev A	Firmed	-	4/20/20	6 pcs	0 pcs	6 pcs	\$13.3333/pcs	\$80.00
							X6			APR 23 2020				
2	209720	HT-500-CWA-010P-70AF	HT-500-CWA Rev 10			Wash Emblem as per Dwg Rev 10	Firmed	-	4/20/20	6 Ea	0 Ea	6 Ea	\$13.3333/Ea	\$80.00
							X6			APR 23 2020				
3	208721	HT-500-CWA-010P-70BP	HT-500-CWA Rev 10			Rinse Emblem	Firmed	-	4/20/20	6 Ea	0 Ea	6 Ea	\$13.3333/Ea	\$80.00
							X6			APR 23 2020				
4	208711	D3428-1P	D3428 REV. A			Placard D3428-1 : Various STC's As Per Dwg. D3428 Rev. A	Firmed	-	4/20/20	12 pcs	0 pcs	12 pcs	\$6.6666/pcs	\$80.00
							X12			APR 23 2020				
5	208836	D5409-3P	D5409 Rev A			Placard : AS PER DWG D5409 REV. A	Firmed	-	4/20/20	36 pcs	0 pcs	36 pcs	\$3.3333/pcs	\$120.00
							X36			APR 23 2020				
6	208835	D5409-1P	D5409 REV. A			Placard : Various STC's AS PER DWG D5409 REV. A	Firmed	-	4/20/20	36 pcs	0 pcs	36 pcs	\$3.3333/pcs	\$120.00
							X36			APR 23 2020				
7	208866	D3519-3P	D3519 Rev C			Placard : Various STC's As Per Dwg D3519 Rev. C	Firmed	-	4/20/20	6 pcs	0 pcs	6 pcs	\$13.33333330/pcs	\$80.00
							X6			APR 23 2020				

Plex 4/9/20 11:17 AM Dart.Guerin.Kimberley



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB046250



Items

Line Item	Job	Part	Drawing	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
8	208858	D2258-154P	D2258 Rev F			Placard As per Dwg D2258 Rev. F	Firmed x6	-	4/20/20	6 pcs	0 pcs	6 pcs	\$13.33333330/pcs	\$80.00
											APR 23 2020			
9	208859	D2258-176P	D2258 Rev F			Placard As Per Dwg D2258 Rev. F	Firmed x6	-	4/20/20	6 Ea	0 Ea	6 Ea	\$13.33333330/Ea	\$80.00
											APR 23 2020			
10	208865	D3519-1P	D3519 Rev C			Placard as per Dwg Rev C : Various STC's receive pcs	Firmed x6	-	4/20/20	6 Ea	0 Ea	6 Ea	\$13.3333/Ea	\$80.00
											APR 23 2020			
11	208857	D2258-146P	D2258 Rev F			Placard as per Dwg Rev F receive pcs	Firmed x6	-	4/20/20	6 Ea	0 Ea	6 Ea	\$13.3333/Ea	\$80.00
											APR 23 2020			
Grand Total:														\$960.00

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Procurement Quality Clauses

- A005 RIGHT OF ENTRY
- A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER)
- A012 CHEMICAL AND PHYSICAL TEST REPORTS
- A016 PERSONNEL QUALIFICATION
- A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
- A026 CERTIFICATION OF MATERIAL CONFORMANCE
- A041 QUALITY MANAGEMENT SYSTEM
- A042 DART NOTIFICATION BY SUPPLIER
- A043 RETENTION OF QUALITY DOCUMENT
- A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM
- A049 SUPPLIER AWARENESS

Sherrin

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*** CERTIFICATE of CONFORMITY ***

Manufacture:

STUDIO SLZ.

Purchase order #:

PO HBO 4629

Packing Slip#

27003

Part #:

Drawing Rev:

Serial/Batch:

Description (Part Name):

6
6

D2567 REVA

HT-500-CWA Rev 10 70AP

6
6
6
6

D3519 REV C 3P

D2258 Rev F 154P

D2258 Rev F 176P

D3519 Rev C 1P

D2258 Rev F 146P

6
12
36
36

HT-500-CWA Rev 10 70BP

D3428 REVA 1P

D5409 REVA 3P

D5409 REVA 1P

Quantity:

132.

Certification:

We hereby certify that:

PLEASE
CHECK
BOX IF
REQUIRED

1. The above listed items were manufactured and/or inspected in accordance with applicable supplied drawings and/or specifications. ☒
 2. All work was accomplished in accordance with the Dart Aerospace Ltd. purchase order. ☒
 3. Results of all inspections, chemical or physical test, as well as other evidence, which shows the acceptability of raw materials, parts and/or assembly components are on file and available for inspection at any time. ☒
- All material certification or copies of purchase orders of the material used to manufacture this component have been attached to this document. ☒

Record Expiry Date of Materials:

April 15 - 2021

Authority:

Approval:

GRACE BATISTA

Date: (yyyy/mm/dd)

2020 04 15

Signature:

[Signature]

Title:

OWNER

*** CERTIFICATE of CONFORMITY ***

Manufacture:

Studio SL2.

Purchase order #:

PO HB046250

Packing Slip#

27003

Part #:

Drawing Rev:

Serial/Batch:

Description (Part #)

Description

Quantity:

132.

PLEASE
CHECK
BOX IF
REQUIRED

Quantity

6
6
6
12
36
36
6
6
6
6
6
6

D2567 REV A
HT-500-CWA Rev 10 70AP
HT-500-CWA Rev 10 70BP
D3428 REV A 1P
D5409 REV A 3P
D5409 REV A 1P
D3519 REV C 3P
D2258 Rev F 154P
D2258 Rev F 176P
D3519 Rev C 1P
D2258 Rev F 146P

POHB046250
att: Kimberley Guerin

d/or inspected in
and/or



accordance with the Dart Aerospace



3. Results of all inspections, chemical or physical test, as well as other evidence, which shows the acceptability of raw materials, parts and/or assembly components are on file and available for inspection at any time.



4. All material certification or copies of purchase orders of the material used to manufacture this component have been attached to this document.



Record Expiry Date of Materials:

April 16, 2021

Authority:

SM & Agency

Approval:

Grace Batista

Date: (yyyy/mm/dd)

2020/4/16.

Signature:

[Signature]

Title:

OWNER.

DAS
82
9-89

210 Main West
Hawkesbury, Ontario K6A 2H6
Canada

INVOICE

Invoice No.: 49532
Date: 04/15/2020
Ship Date:
Page: 1
Re: Order No.

Sold to:

Dart Aerospace Ltd

1270 Aberdeen
Hawkesbury, Ontario
K6A 1K7

Ship to:

Dart Aerospace Ltd

1270 Aberdeen
Hawkesbury, Ontario
K6A 1K7

825007651RT0001

Quantity	Description	Base Price	Disc. %	Unit Price	Tax code	Amount
✓ 6	D2567 REV A	13.3333		13.3333	H	80.00
✓ 6	HT-500-CWA Rev 10 70AP	13.3333		13.3333	H	80.00
✓ 6	HT-500-CWA Rev 10 70BP	13.3333		13.3333	H	80.00
✓ 12	D3428 REV A 1P	6.6667		6.6667	H	80.00
✓ 36	D5409 REV A 3P	3.3333		3.3333	H	120.00
✓ 36	D5409 REV A 1P	3.3333		3.3333	H	120.00
✓ 6	D3519 REV C 3P	13.3333		13.3333	H	80.00
✓ 6	D2258 Rev F 154P	13.3333		13.3333	H	80.00
✓ 6	D2258 Rev F 176P	13.3333		13.3333	H	80.00
✓ 6	D3519 Rev C 1P	13.3333		13.3333	H	80.00
✓ 6	D2258Rev F 146P	13.3333		13.3333	H	80.00
	POHB046250 att: Kimberley Guerin					
	Subtotal:					960.00
	H - HST HST					124.80
Thank you for your business / Merci de faire affaire avec nous						

RECEIVED

APR 17 2020

DART AEROSPACE LTD.

Shipped By:	Tracking Number:	HST: 825007651RT0001	Total Amount	1,084.80
Comment: WO27003			Amount Paid	0.00
Sold By:			Amount Owning	1,084.80

**IJ35-10
IJ35-20****Quick Links**

[3M Graphics Warranties](#)
[Technical Information Selector](#)
[Safety Data Sheets \(SDS\)](#)
[Flammability \(ASTM E84 Reports\)](#)
[Videos](#)

Product Description

- For Solvent, Eco-Solvent UV and Latex Inkjet Printing and Screen Printing
- 3.2-mil vinyl film

Product Features

- Available in gloss and matte finishes
- Pressure-sensitive adhesive
- Permanent
- Expected Performance Life of 5 years (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, outdoor surface)

Recommended Types of Graphics and End Uses

- Short to long-term, indoor and outdoor promotional graphics
- Signs, trade show and point-of-purchase displays
- Exhibits and architectural applications

Graphic Protection

Graphic protection can improve the appearance, performance and durability of your graphic. Always use only the graphic protection options recommended in this Bulletin for this film.

- [3M™ Scotchcal™ Gloss Overlaminate 8508](#)
- [3M™ Scotchcal™ Luster Overlaminate 8509](#)
- [3M™ Scotchcal™ Matte Overlaminate 8510](#)

Characteristics

These are typical values for unprocessed product. Processing may change the values.

Physical Characteristics

Characteristic	Value
Material	Vinyl
Film Color	White, opaque
Thickness	Without adhesive: 3.25 mil (0.081 mm) With adhesive: 4.0 mil (0.102 mm)
Adhesive	Pressure sensitive
Adhesive Color	Gray
Liner	Polycoated paper
Flammability	ASTM E84 reports: IJ35-10 and IJ35-20, or go to the On-line Product Catalog at 3Mgraphics.com

DAS
82
9-89

3M™ Scotchcal™ Graphic Film

Application Characteristics

Characteristic	Value
Finished Graphic Application Recommendation	Surface type: Smooth, flat and simple curved surfaces Substrate type: Metal, rigid plastic and painted surfaces Application temperature: 40° – 100°F (4° – 38°C) air and substrate Application method: Dry
Temperature Range After Application	-59 °F to +192 °F (-50 °C to +90 °C) (not for extended periods of time at the extremes)
Graphic Removal	Permanent

Warranty Information

Warranty Coverage Overview

The warranty coverage for eligible graphics is based on the user both reading and following all applicable and current 3M Graphics Product and Instruction Bulletins. The warranty period for eligible graphics is as stated in the 3M Graphics Warranties Matrices at the time that the film was purchased. Information found at 3MGraphics.com/warranties includes:

- [3M Graphics Warranties Bulletin](#)
 - This bulletin contains information on limitations and exceptions, and warranty period reductions for 3M Graphics Warranties. The warranty period may be reduced and stipulations may apply for certain constructions, applications, and graphic exposures as covered in this Bulletin.
- [3M Graphics Warranties Selector](#)
 - Use this selector to search for your vertical warranty period by product type, ink type, film name, and/or ink/printer platform.
- [U.S. Desert Southwest Region Map](#)
 - Use this map of hot, arid desert areas to determine if you are subject to reduced warranted durabilities.

The warranties set forth in this Bulletin are made in lieu of all other express or implied warranties, including any implied warranty of merchantability, fitness for a particular purpose, or arising out of a course of dealing, custom, or usage of trade.

3M Basic Product Warranty

3M Graphics Products are warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in its applicable 3M Graphics Product Bulletin and as further set forth in the [3M Graphics Warranties Bulletin](#).

Limited Remedy

The limited remedy applicable to each warranty is addressed in the 3M Graphics Warranties Bulletin found at 3MGraphics.com/warranties.

Limitation of Liability

Except where prohibited by law, 3M SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO PURCHASER OR USER FOR ANY DIRECT (EXCEPT FOR THE LIMITED REMEDY PROVIDED IN THE 3M GRAPHICS WARRANTIES BULLETIN), INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LABOR, NON-3M MATERIAL CHARGES, LOSS OF PROFITS, REVENUE, BUSINESS, OPPORTUNITY, OR GOODWILL) RESULTING FROM OR IN ANY WAY RELATED TO 3M'S GRAPHICS PRODUCTS, SERVICES, OR THIS BULLETIN. This limitation of liability applies regardless of the legal or equitable theory under which such losses or damages are sought.

Additional Limitations

See the 3M Graphics Warranties Bulletin at 3MGraphics.com/warranties, for terms, additional limitations of your warranty, if any, information on reduced warranties for different exposures, and limitations of liability.

Factors that Affect Graphic Performance Life

The actual performance life of a graphic is affected by:

- the combinations of graphics materials used.
- complete ink drying or curing.
- selection, condition and preparation of the substrate.
- surface texture.
- application methods.
- angle and direction of sun exposure.
- environmental conditions.
- cleaning or maintenance methods.

Graphics Manufacturing



CAUTION

Before using any equipment, always read the manufacturer's instructions for safe operation.

Inkjet Printing

Always read and follow the ink manufacturer's written instructions on usage.

- **Sheeted film:** When used on a flat-bed inkjet printer, sheeted film may produce printing defects.
- **Ink limiting:** The recommended maximum ink limit is 250%.
- **If sheeted or stacked graphics will be stored:** If you plan to store sheeted and stacked finished graphics for an extended period of times, leave an unprinted margin (about 1/4 inch) to allow for possible shrinkage before trimming the graphic.

Do not exceed the recommended total ink coverage for the ink series used on this film. Having too high a total physical ink amount on the film results in media characteristic changes, incomplete drying, overlamine lifting, and/or poor graphic performance.

Completely Dry Graphics



IMPORTANT NOTE

Incomplete drying or curing can result in graphic failure including curling, increased shrinkage and adhesion failure, which are not covered under any 3M Graphic Warranty.

See the ink's 3M Product and Instruction Bulletin for more details.

Screen Printing

Formulations and processing conditions can affect ink durability. Refer to the Product and Instruction Bulletins for your ink for limitations and proper usage.

Cutting

See [3M Instruction Bulletin 4.1](#) for Sheeting, Scoring and Film Cutting details.

Graphic Protection

Graphic protection may improve the appearance, performance and durability of the graphic. Click on the graphic protection options listed in Product Bulletin or see the [3M Graphics Market Product Catalog](#), for more information.



IMPORTANT NOTE

During installation, scratches may occur on films without graphic protection.

3M™ Scotchcal™ Graphic Film

Application and Installation

In addition to other 3M Bulletins specified in this document, the following Bulletins provide details that you may need to successfully apply a graphic.

- [3M Instruction Bulletin 4.22](#). Hot and Cold Roll Lamination for 3M Overlaminates.
- [3M Instruction Bulletin 5.1](#) Select and Prepare Substrates for Graphic Application
- [3M Instruction Bulletin 5.19](#). Lamination, Application & Maintenance of Floor Graphics. Complete the Surface Preparation procedure found in this Instruction Bulletin prior to applying a graphic to a surface.
- [3M Instruction Bulletin 5.5](#) Application, General Procedures for Interior and Exterior Dry Application
- [3M Instruction Bulletin 6.5](#) Storage, Handling, Maintenance, and Removal of Films and Sheetings

Pressure-sensitive Adhesive

This film has a pressure-sensitive adhesive. It bonds to the surface even with light pressure and cannot be repositioned.

Maintenance and Cleaning

Use a cleaner designed for high-quality painted surfaces. The cleaner must be wet, non-abrasive, without solvents, and have a pH value between 3 and 11 (neither strongly acidic nor strongly alkaline). See [3M Instruction Bulletin 6.5](#) for details.

Shelf Life, Storage and Shipping

Shelf Life

The shelf life is **never more than 2 years** from the date of manufacture on the original box.

If you process the film, the shelf life is changed to **1 year** from the processing date, but not later than the 2 year maximum from the manufacturing date.

Storage Conditions

- 90 °F (32 °C) maximum
- Out of sunlight
- Clean, dry area
- Original container
- Bring the film to print room temperature before using

Shipping Finished Graphics

Flat, or rolled printed side out on 5 inch (13 cm) or larger core. This helps prevent the liner, if used, from popping off.

Health and Safety

CAUTION

When handling any chemical products, read the manufacturer's container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information. To obtain SDS sheets for 3M products go to 3M.com/SDS, or by mail or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturer's instructions for safe operation.

Bulletin Change Summary

For the most current 3M Technical Information available to successfully use this product, please view this Bulletin electronically and click on the blue underlined links to view the relevant documents.

Release J, NOV-2016:

- Updated Thickness. See "Physical Characteristics" on page 1.

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Avery® IPM™ 2031

issued: 01/04/2005

Introduction

Avery® IPM™ 2031 is a high quality pressure-sensitive vinyl film, designed for use on wide format inkjet printers. Avery® IPM™ 2031 has excellent printing properties, allowing crisp print quality with bright and vibrant colours. Avery® IPM™ 2031 offers rapid ink drying and a water-resistant material. It combines good adhesion during its life and easy removal afterwards.

Description

Facefilm: 80-micron premium white calendered, topcoated vinyl.

Adhesive: removable, acrylic based

Backing paper: one side coated kraft paper, 140 g/m²

Features

- Excellent printability
- Vibrant and bright colours
- Crisp print quality
- Spray water resistant wit specific pigmented inks
- Good adhesion, excellent removability
- Warranty on outdoor durability

Recommendations for use

A wide variety of full-colour graphics for indoor - and **short/medium term outdoor** applications such as posters, murals, displays, exhibition stands, vehicle graphics etc. Avery® IPM™ 2031 is suitable for application to a wide variety of substrates and will remove cleanly for up to 1 year after application.

IPM media should be handled with care as any surface contamination may affect the print quality. Media should be processed in an environment of 15-25°C and 30-70% relative humidity. After drying, the finished prints should be wrapped in polyethylene film and despatched flat or rolled with the printed side facing outwards. To protect prints against water, UV/light and abrasion, overlamination with a clear film is recommended. For specific details of Avery® DOL combinations, refer to "Technical Bulletin 5.3. Recommended combinations of Avery® Overlaminates and Avery® Digital Print Media"

Always test your combination of Avery® IPM™ medium, inkjet printer and inks prior to commercial use.

Compatibility

Avery® IPM™ 2031 is compatible with a broad selection of inkjet printers, when printing with pigmented, water based inks. For specific details refer to "Technical Bulletin 5.6 Avery Dennison Inkjet Print Media - Printer compatibility".

Durability:

Avery® IPM™ 2031 is warranted for outdoor use in conjunction with pigmented outdoor inks from HP, Encad and Colorspan. The warranted period varies from type of application and type of overlaminate from 18 months up to 5 years. For full details, see our Avery® IPM™ Outdoor warranty.



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PRODUCT CHARACTERISTICS

Avery® IPM™ 2031

Physical properties

Features	Test method ¹	Results
Caliper, facefilm	ISO 534	80 µm
Gloss	ISO 2813, 20°	1%
Dimensional stability	DIN 30646	0.3 mm. max
Adhesion, initial	FINAT FTM-1, stainless steel	180 N/m
Adhesion, ultimate	FINAT FTM-1, stainless steel	260 N/m
Flammability		Self extinguishing
Accelerating ageing	DIN 53587, 500h exposure	No negative impact on film
Shelf life	Stored at 22° C/50-55 % RH	Performance
Removability		2 years
Not when applied to: Nitro-cellulose paints, ABS, Polystyrene, certain types of PVC		up to 1 year
Durability ²	Overlaminated with DOL 4300	5 years
	Overlaminated with DOL 1000, DOL 1100 with overlaps	3 years
	Overlaminated without overlaps for static applications only	2 years
	Without overlaminate and used for static, Non-abrasive application ONLY	18 months

Only when printed with ENCAD GO, HP and Colorspan pigmented inks and when properly applied in accordance with our application instructions. Only applicable for vertical exposure.

Temperature range

Features	Results
Application temperature	Minimum: +10°C
Service temperature	-20°C to +80°C

Important

Information on physical and chemical characteristics is based upon tests we believe to be reliable. The values listed herein are typical values and are not for use in specifications. They are intended only as a source of information and are given without guarantee and do not constitute a warranty. Purchasers should independently determine, prior to use, the suitability of this material to their specific use. All technical data are subject to change. In case of any ambiguities or differences between the English and foreign versions of these Conditions, the English version shall be controlling.

Warranty

Avery® branded materials are manufactured under careful quality control and are warranted to be free from defect in material and workmanship. Any material shown to our satisfaction to be defective at the time of sale will be replaced without charge. Our aggregate liability to the purchaser shall in no circumstances exceed the cost of the defective materials supplied. No salesman, representative or agent is authorised to give any guarantee, warranty, or make any representation contrary to the foregoing.

All Avery® branded materials are sold subject to the above conditions, being part of our standard conditions of sale, a copy of which is available on request.

1) Test methods

More information about our test methods can be found on our website.

2) Durability

The durability is based on middle European exposure conditions. Actual performance life will depend on substrate preparation, exposure conditions and maintenance of the marking. For instance, in the case of signs facing south; in areas of long high temperature exposure such as southern European countries; in industrially polluted areas or high altitudes, exterior performance will be decreased.



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